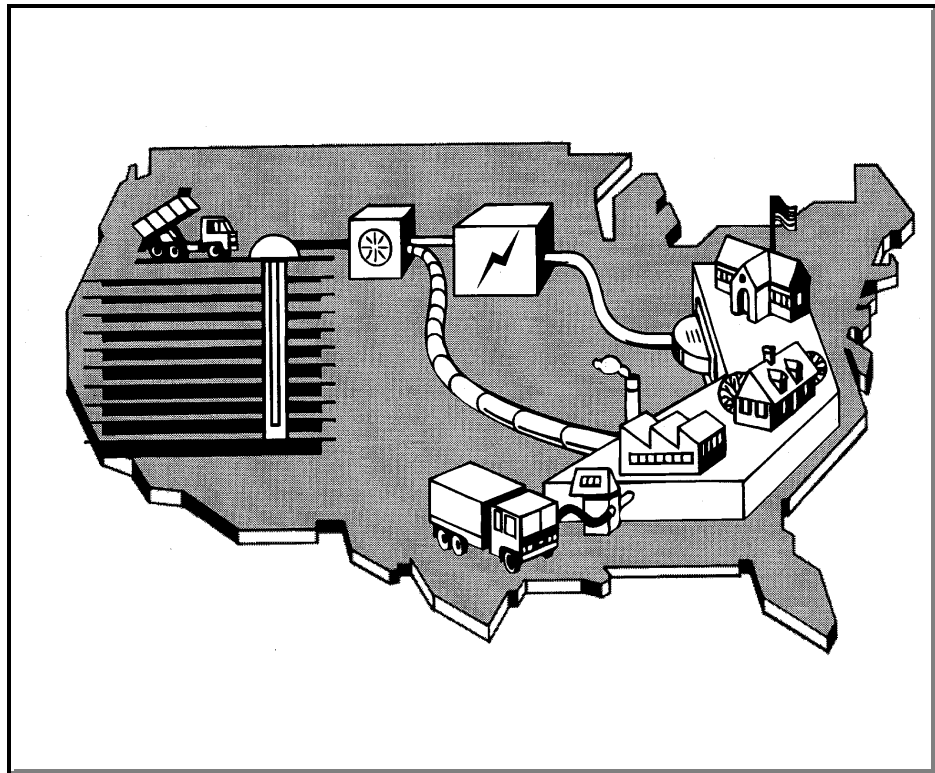




Landfill Gas-to-Energy Project Opportunities

Landfill Profiles for the State of Colorado



EPA Landfill Methane Outreach Program



The EPA Landfill Methane Outreach Program, a key component of the United State's *Climate Change Action Plan*, encourages the use of landfill gas (LFG) as an energy resource. EPA assists utilities, municipal and private landfill owners and operators, tribes, and state agencies in reducing methane emissions from landfills through the development of profitable landfill energy recovery projects. Methane captured from landfills can be transformed into a cost-effective fuel source for electricity, heat, boiler and vehicular fuel, or sale to a pipeline. EPA estimates there are approximately 200 landfill methane recovery projects in the U.S. and that up to 750 landfills could install economically viable landfill energy projects.

The Landfill Methane Outreach Program includes five important components: the State Ally, Energy Ally, Industry Ally, Community Partner, and Endorser programs. EPA establishes separate alliances with state agencies, energy providers (including investor-owned, municipal and other public power utilities and cooperatives), key trade and public sector associations, members of the landfill gas development industry (including developers, engineers, equipment vendors, and others) and local communities, municipalities and landfill owner/operators through a Memorandum of Understanding (MOU). By signing the MOU, each Ally/Partner acknowledges a shared commitment to the promotion of landfill gas-to-energy recovery at solid waste landfills, recognizes that the widespread use of landfill gas will reduce emissions of methane and other gases, and commits to undertake activities to enhance development of this resource. In return, EPA agrees to provide landfill gas-to-energy project assistance and public recognition of the Allies' and Partners' participation in the program.

Introduction

Since 1994 the U.S. EPA's Landfill Methane Outreach Program (LMOP) has participated in an ongoing effort to gather information on Municipal Solid Waste landfills (MSW). A key component of the LMOP is to provide MSW landfill owners and operators, project developers, utilities, and other potential project participants with information on MSW landfills that may offer attractive energy development opportunities. This document presents state specific landfill information, hereinafter referred to as the landfill profiles. These profiles are useful to evaluate the potential for developing landfill gas-to-energy projects (LFGTE). EPA assembled this information from state and local sources as well as various national solid waste publications, landfill owners and operators, and project developers.

The EPA has prepared a separate document to describe the methodology used to develop the state-specific landfill profiles and estimate the benefits of using LFGTE as an energy source. The document, *Landfill Gas-to-Energy Project Opportunities, Background Information on Landfill Profiles*, contains background information on gas collection and use, describes the data fields according to the five sections listed on the landfill profiles, and where applicable, illustrates calculations and default values used to derive estimates. EPA strongly recommends that users read the document prior to using the landfill profiles. Users can obtain the document by calling the LMOP hotline at 1-888-STAR-YES.

Data Sources

- EPA-ORD Landfill Gas Utilization-Survey (Thorneloe, 1997)
- Directory and Atlas of Solid Waste Disposal Facilities (SWA, 1994)
- Implementation Guide for Landfill Gas Recovery Projects in the Northeast (SCS, 1994)
- Landfill Gas-to-Energy 1994-1995 Activity Report (SWT, 1994)
- Methane Recovery from Landfill Yearbook (GAA, 1994)
- Project developers, landfill owners, and operators
- State and local records
- Survey of Landfill Gas Generation Potential (EPRI, 1992)
- U.S. Landfill Directory (SWANA, 1992)

Landfill Classification

To facilitate the use of available landfill information, EPA has categorized the landfills into five categories: Current Project,¹ Candidate Project, Shutdown, Other, and Unknown waste-in-place (WIP). These categories are based on the status of the landfill's LFGTE project(s) and WIP. The generation of methane is a function of many factors, the most critical being the amount of waste-in-place and the number of years the waste has been in the landfill. Peak methane generation occurs soon after closure; therefore, the longer the landfill has been closed, the less attractive it becomes for methane recovery. Based on the general timing of peak methane generation, EPA assumes that landfills that ceased accepting waste prior to 1993 have a low probability of generating enough methane to make a gas recovery project economical. Consequently, landfills need to be operating in 1993 to be considered as having a Candidate Project.

Landfill Categorizes

Current Project:

- Landfill with operational LFGTE project or landfill with LFGTE project under construction.

Candidate Project:

- Landfill with a potential or planned LFGTE utilization project; or
- Landfill is currently operating or closed after 1993; and has more than 1,000,000 tons of municipal solid waste-in-place.²

Shutdown:

- Landfill with shutdown LFGTE project.

Other:

- Landfill has less than 1,000,000 tons of municipal solid waste-in-place with no current or planned LFGTE project.

Unknown WIP:

- Landfill with insufficient data to determine the waste-in-place.

State Summary

State-specific landfill profile information is summarized in three exhibits. Exhibit 1 presents a summary of the state-specific potential for LFG utilization energy by landfill category. Exhibit 2 summarizes the emissions avoided by fossil fuel displacement for electricity generation and direct use projects. Exhibit 3 presents an index of the state-specific MSW landfills, referenced by category, landfill name and general characteristics.

¹ Current projects illustrate the wide range of successful project development options.

² By modeling the relationship between WIP and methane generation, a cut-off of 1,000,000 tons of WIP was established; landfills having at least 1,000,000 tons of WIP are considered candidate landfills.



Exhibit 1: Colorado MSW Landfill Summary

Category	No. of Landfills	Est. Capacity Potential		Est. CH4 Generation (mmscf/d)	Methane Reduction (tons/yr)		CO2 Equivalent of CH4 Reduction (tons/yr)	
		Electricity (MW)	Gas Capacity (mmBtu/hr)		Potential	Current	Potential	Current
Current	1	23	230	7	42,555	1,156	893,661	24,282
Candidate	9	70	696	22	128,797	0	2,704,735	0
Shutdown	1	5	54	2	10,053	5,782	211,105	121,414
Other	15	67	673	22	124,441	0	2,613,255	0
Unknown WIP	2							
Total	28	165	1,653	53	305,846	6,938	6,422,756	145,696

Exhibit 2: Potential Colorado Emissions Avoided by Fossil Fuel Displacement

Category	Electricity Generation Project						Direct Use Project					
	CO2 (tons/yr)			SO2 (tons/yr)			CO2 (tons/yr)			SO2 (tons/yr)		
	Coal	Oil	Natural Gas	Coal	Oil	Natural Gas	Coal	Oil	Natural Gas	Coal	Oil	Natural Gas
Current	181,534	148,995	100,186	1,147	959	0	128,149	105,179	70,724	1,166	613	1
Candidate	549,336	450,870	303,171	3,472	2,902	0	387,855	318,334	214,052	3,529	1,855	2
Shutdown	42,621	34,981	23,522	269	225	0	30,272	24,846	16,707	275	145	0
Other	531,183	435,971	293,153	3,358	2,806	0	374,736	307,566	206,812	3,410	1,793	2
Unknown WIP												
Total	1,304,673	1,070,817	720,032	8,247	6,893	0	921,012	755,925	508,294	8,380	4,405	5

Exhibit 3: Index of Landfills in Colorado

Category	Landfill Name	WIP			Landfill Operating in 1998	LFG Collected	LFG Utilization Project	Status of LFGTE Project
		<2.5 million tons	2.5 to 4 million tons	>4 million tons				
Current	County Line LF	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Operational
Candidate	BFI/Fountain Landfill	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Candidate	BFI/RPS Landfill-Golden	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Candidate	Central Weld County Landfill	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Candidate	Denver Arapahoe Disposal Site-DADs	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Candidate	Denver Regional Landfill (North)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Potential
Candidate	Denver Regional Landfill (South)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Planned
Candidate	Fort Collins-Loveland LF	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Candidate	Orchard Mesa SWDS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Candidate	WMI/Colorado Springs SWDS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Shutdown	Southside Solid Waste Disposal Site	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Shutdown
Other	BFI/Commerce City -Tower Road LF	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Boulder Landfill	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Broadacer Landfill Inc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Longmont SLF	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Lowry Landfill	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Milner Landfill	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Montrose East End SWDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Morgan County SWDLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	North Weld LF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Pitkin County Solid Waste Center	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	South Canyon Landfill	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Summit County Solid Waste Disposal S	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Templeton Gap Landfill	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Waste Management Midway Landfill	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	York & SH 224	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Unknown WIP	Archuleta County Landfill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Unknown WIP	Consolidated Waste Services LF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown

BFI/Fountain Landfill		Landfill Category: Candidate	
A. GENERAL LANDFILL INFORMATION			
Landfill Owner:	BFI	Annual Acceptance Rate (tons):	240,497
Landfill Owner Type:		Year Annual Acceptance Rate Reported:	
Alternative Landfill Name:	BFI/Fountain SWDLF	Design Capacity (tons):	
City:	Fountain	Acres Currently Landfilled (acres):	
County:	El Paso	Average Depth (feet):	
State:	CO	Waste-in-Place (tons):	5,218,297
Year Open:	1968	1998 Waste-in-Place (tons):	5,218,297
Year Closed:	2002		
B. LANDFILL GAS COLLECTION			
Estimated Methane Generation (mmscf/d):		1.75	
LFG Collection System Status:		N.A.	
Current LFG Collected (mmscf/d):			
Collection and Treatment System Required Under NSPS/EG:		No	
C. LANDFILL GAS UTILIZATION			
Current Utilization:			
Utilization System Status:	Unknown		
Utilization System Type:	Unknown		
Utilization System Start Year:			
Electric Utility Provider(s):			
Natural Gas Provider(s):			
Energy Purchaser(s):			
Capacity:	Electricity Generation Project (MW)	OR	Direct Use Project (mmBtu/hr)
Estimated Potential Capacity:	6		55
Current Capacity:			
Planned Capacity:			
Utilities in County: Colorado Springs Utilities; Fountain Electric Dept; Intermountain Rural Elec Assn; Mountain View E			
D. ENVIRONMENTAL BENEFITS OF UTILIZATION			
	<i>Potential</i>		<i>Current</i>
Methane Reduction (tons/yr):	10,133		0
CO2 Equivalent of CH4 Reduction (tons/yr):	212,801		0
Emissions Avoided by Fossil Fuel Displacement:	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>
	CO2 (tons/yr)	SO2 (tons/yr)	CO2 (tons/yr) SO2 (tons/yr)
Coal:	43,410	274	30,515 278
Fuel Oil:	35,629	229	25,046 146
Natural Gas:	23,958	0	16,841 0
E. CONTACT INFORMATION			
Landfill Owner		Landfill Operator	
Contact Name:	Chris Baskell	Chris Baskell	
Mailing Address:	P.O. Box 370	P.O. Box 370	
Phone Number:	(719) 382-9661	(719) 382-9661	
Fax Number:			

* *Italicized indicates values estimated by EPA.*

BFI/RPS Landfill-Golden		Landfill Category: Candidate	
A. GENERAL LANDFILL INFORMATION			
Landfill Owner:	BFI	Annual Acceptance Rate (tons):	485,656
Landfill Owner Type:		Year Annual Acceptance Rate Reported:	
Alternative Landfill Name:	Foothills Landfill; Highway 93 SWDS	Design Capacity (tons):	
City:		Acres Currently Landfilled (acres):	
County:	Jefferson	Average Depth (feet):	
State:	CO	Waste-in-Place (tons):	3,394,539
Year Open:	1986	1998 Waste-in-Place (tons):	3,394,539
Year Closed:	2022		
B. LANDFILL GAS COLLECTION			
Estimated Methane Generation (mmscf/d):		1.29	
LFG Collection System Status:		N.A.	
Current LFG Collected (mmscf/d):			
Collection and Treatment System Required Under NSPS/EG:		No	
C. LANDFILL GAS UTILIZATION			
Current Utilization:			
Utilization System Status:	Unknown		
Utilization System Type:	Unknown		
Utilization System Start Year:			
Electric Utility Provider(s):			
Natural Gas Provider(s):			
Energy Purchaser(s):			
Capacity:	Electricity Generation Project (MW)	OR	Direct Use Project (mmBtu/hr)
Estimated Potential Capacity:	4		40
Current Capacity:			
Planned Capacity:			
Utilities in County: Intermountain Rural Elec Assn; Public Service Co of Colorado; United Power Inc; Western Area Pow			
D. ENVIRONMENTAL BENEFITS OF UTILIZATION			
	<i>Potential</i>		<i>Current</i>
Methane Reduction (tons/yr):	7,436		0
CO2 Equivalent of CH4 Reduction (tons/yr):	156,164		0
Emissions Avoided by Fossil Fuel Displacement:	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>
	CO2 (tons/yr)	SO2 (tons/yr)	CO2 (tons/yr) SO2 (tons/yr)
Coal:	31,571	200	22,394 204
Fuel Oil:	25,912	167	18,380 107
Natural Gas:	17,424	0	12,359 0
E. CONTACT INFORMATION			
Landfill Owner		Landfill Operator	
Contact Name:	Frank Schuetzler	Frank Schuetzler	
Mailing Address:	8480 Tower Road	8480 Tower Road	
Phone Number:	(303) 279-5115	(303) 279-5115	
Fax Number:			

Central Weld County Landfill			Landfill Category: Candidate	
A. GENERAL LANDFILL INFORMATION				
Landfill Owner:	Waste Services, Inc.	Annual Acceptance Rate (tons):	177,708	
Landfill Owner Type:		Year Annual Acceptance Rate Reported:		
Alternative Landfill Name:	Central Weld County SWDS	Design Capacity (tons):		
City:		Acres Currently Landfilled (acres):		
County:	Weld	Average Depth (feet):		
State:	CO	Waste-in-Place (tons):	6,246,093	
Year Open:	1967	1998 Waste-in-Place (tons):	6,246,093	
Year Closed:	1995			
B. LANDFILL GAS COLLECTION				
Estimated Methane Generation (mmscf/d):		1.96		
LFG Collection System Status:		N.A.		
Current LFG Collected (mmscf/d):				
Collection and Treatment System Required Under NSPS/EG:		No		
C. LANDFILL GAS UTILIZATION				
Current Utilization:				
Utilization System Status:	Unknown			
Utilization System Type:	Unknown			
Utilization System Start Year:				
Electric Utility Provider(s):				
Natural Gas Provider(s):				
Energy Purchaser(s):				
Capacity:	Electricity Generation Project (MW)	OR	Direct Use Project (mmBtu/hr)	
Estimated Potential Capacity:	6		61	
Current Capacity:				
Planned Capacity:				
Utilities in County: Frederick Municipal Light System; Highline Electric Assn; Morgan County Rural Elec Assn; Poudre				
D. ENVIRONMENTAL BENEFITS OF UTILIZATION				
	<i>Potential</i>		<i>Current</i>	
Methane Reduction (tons/yr):	11,323		0	
CO2 Equivalent of CH4 Reduction (tons/yr):	237,791		0	
Emissions Avoided by Fossil Fuel Displacement:	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	CO2 (tons/yr)	SO2 (tons/yr)	CO2 (tons/yr)	SO2 (tons/yr)
Coal:	48,146	304	34,099	310
Fuel Oil:	39,516	254	27,987	163
Natural Gas:	26,571	0	18,819	0
E. CONTACT INFORMATION				
Landfill Owner			Landfill Operator	
Contact Name:	Brad Kierns	Brad Kierns		
Mailing Address:	6037 77th Avenue	6037 77th Avenue		
Phone Number:	(303) 330-2641	(303) 330-2641		
Fax Number:				

* *Italicized indicates values estimated by EPA.*

County Line LF		Landfill Category:	Current
A. GENERAL LANDFILL INFORMATION			
Landfill Owner:	Arapahoe County	Annual Acceptance Rate (tons):	
Landfill Owner Type:	Public	Year Annual Acceptance Rate Reported:	
Alternative Landfill Name:		Design Capacity (tons):	
City:	Littleton	Acres Currently Landfilled (acres):	90
County:	Douglas	Average Depth (feet):	85
State:	CO	Waste-in-Place (tons):	30,000,000
Year Open:	1966	1998 Waste-in-Place (tons):	30,000,000
Year Closed:	1987		
B. LANDFILL GAS COLLECTION			
Estimated Methane Generation (mmscf/d):	7.36		
LFG Collection System Status:	Operational		
Current LFG Collected (mmscf/d):	0.3		
Collection and Treatment System Required Under NSPS/EG:	No		
C. LANDFILL GAS UTILIZATION			
Current Utilization:			
Utilization System Status:	Operational		
Utilization System Type:	Reciprocating Engine		
Utilization System Start Year:	1986		
Electric Utility Provider(s):	Public Service Co. of Colorado		
Natural Gas Provider(s):			
Energy Purchaser(s):	Public electric utilities		
Capacity:	Electricity Generation Project (MW)	OR	Direct Use Project (mmBtu/hr)
Estimated Potential Capacity:	23		230
Current Capacity:	0.8		6
Planned Capacity:			
Utilities in County:	Intermountain Rural Elec Assn; Morgan County Rural Elec Assn; Mountain View Elec Assn Inc; Pub		
D. ENVIRONMENTAL BENEFITS OF UTILIZATION			
	<i>Potential</i>		<i>Current</i>
Methane Reduction (tons/yr):	42,555		1,156
CO2 Equivalent of CH4 Reduction (tons/yr):	893,661		24,282
Emissions Avoided by Fossil Fuel Displacement:	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>
	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>	<i>CO2 (tons/yr)</i> <i>SO2 (tons/yr)</i>
Coal:	181,534	1,147	128,149 1,166
Fuel Oil:	148,995	959	105,179 613
Natural Gas:	100,186	0	70,724 1
E. CONTACT INFORMATION			
Landfill Owner		Landfill Operator	
Contact Name:	Tom Buchholz	Tom Buchholz	
Mailing Address:	2400 W. Union Avenue Suite 300	2400 W. Union Avenue Suite 300	
Phone Number:	303-738-2816	303-497-4685	
Fax Number:			

* *Italicized indicates values estimated by EPA.*

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Denver Arapahoe Disposal Site-DADs			Landfill Category: Candidate	
A. GENERAL LANDFILL INFORMATION				
Landfill Owner:	City of Denver	Annual Acceptance Rate (tons):	1,753,606	
Landfill Owner Type:		Year Annual Acceptance Rate Reported:		
Alternative Landfill Name:	WMI/Denver Arapahoe Disposal Site LF	Design Capacity (tons):		
City:	Aurora	Acres Currently Landfilled (acres):		
County:	Arapahoe	Average Depth (feet):		
State:	CO	Waste-in-Place (tons):	11,499,652	
Year Open:	1990	1998 Waste-in-Place (tons):	11,499,652	
Year Closed:	2002			
B. LANDFILL GAS COLLECTION				
Estimated Methane Generation (mmscf/d):		3.36		
LFG Collection System Status:		N.A.		
Current LFG Collected (mmscf/d):				
Collection and Treatment System Required Under NSPS/EG:		No		
C. LANDFILL GAS UTILIZATION				
Current Utilization:				
Utilization System Status:		Unknown		
Utilization System Type:		Unknown		
Utilization System Start Year:				
Electric Utility Provider(s):				
Natural Gas Provider(s):				
Energy Purchaser(s):				
Capacity:	Electricity Generation Project (MW)	OR	Direct Use Project (mmBtu/hr)	
Estimated Potential Capacity:	11		105	
Current Capacity:				
Planned Capacity:				
Utilities in County: Intermountain Rural Elec Assn; Morgan County Rural Elec Assn; Mountain View Elec Assn Inc; Pub				
D. ENVIRONMENTAL BENEFITS OF UTILIZATION				
	<i>Potential</i>		<i>Current</i>	
Methane Reduction (tons/yr):	19,422		0	
CO2 Equivalent of CH4 Reduction (tons/yr):	407,866		0	
Emissions Avoided by Fossil Fuel Displacement:	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	CO2 (tons/yr)	SO2 (tons/yr)	CO2 (tons/yr)	SO2 (tons/yr)
Coal:	82,874	524	58,487	532
Fuel Oil:	68,019	438	48,004	280
Natural Gas:	45,737	0	32,278	0
E. CONTACT INFORMATION				
Landfill Owner		Landfill Operator		
Contact Name:		Charles Bayley		
Mailing Address:	City & County Building	P.O. Box 460397		
Phone Number:	(303) 646-2512	(303) 373-0155		
Fax Number:				

Denver Regional Landfill (North)			Landfill Category: Candidate	
A. GENERAL LANDFILL INFORMATION				
Landfill Owner:	Allied Waste (old LWS)	Annual Acceptance Rate (tons):	555,998	
Landfill Owner Type:	Private	Year Annual Acceptance Rate Reported:		
Alternative Landfill Name:	Laidlaw/North Weld County Landfill	Design Capacity (tons):		
City:	Erie	Acres Currently Landfilled (acres):		
County:	Weld	Average Depth (feet):		
State:	CO	Waste-in-Place (tons):	6,827,404	
Year Open:	1984	1998 Waste-in-Place (tons):	6,827,404	
Year Closed:	1992			
B. LANDFILL GAS COLLECTION				
Estimated Methane Generation (mmscf/d):		2.16		
LFG Collection System Status:		N.A.		
Current LFG Collected (mmscf/d):				
Collection and Treatment System Required Under NSPS/EG:		No		
C. LANDFILL GAS UTILIZATION				
Current Utilization:				
Utilization System Status:	Potential			
Utilization System Type:	Unknown			
Utilization System Start Year:				
Electric Utility Provider(s):				
Natural Gas Provider(s):				
Energy Purchaser(s):				
Capacity:	Electricity Generation Project (MW)	OR	Direct Use Project (mmBtu/hr)	
Estimated Potential Capacity:	7		68	
Current Capacity:				
Planned Capacity:				
Utilities in County: Frederick Municipal Light System; Highline Electric Assn; Morgan County Rural Elec Assn; Poudre				
D. ENVIRONMENTAL BENEFITS OF UTILIZATION				
	<i>Potential</i>		<i>Current</i>	
Methane Reduction (tons/yr):	12,513		0	
CO2 Equivalent of CH4 Reduction (tons/yr):	262,771		0	
Emissions Avoided by Fossil Fuel Displacement:	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	CO2 (tons/yr)	SO2 (tons/yr)	CO2 (tons/yr)	SO2 (tons/yr)
Coal:	53,671	339	37,681	343
Fuel Oil:	44,051	284	30,927	180
Natural Gas:	29,620	0	20,796	0
E. CONTACT INFORMATION				
Landfill Owner		Landfill Operator		
Contact Name:	Rick Hoffman	Rick Hoffman		
Mailing Address:	P.O. Box 320	P.O. Box 320		
Phone Number:	(303) 673-9431	(303) 673-9431		
Fax Number:				

* *Italicized indicates values estimated by EPA.*

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Denver Regional Landfill (South)			Landfill Category: Candidate	
A. GENERAL LANDFILL INFORMATION				
Landfill Owner:	Allied Waste (old LWS)	Annual Acceptance Rate (tons):	724,107	
Landfill Owner Type:	Private	Year Annual Acceptance Rate Reported:		
Alternative Landfill Name:	Laidlaw/South Weld County Landfill	Design Capacity (tons):		
City:	Denver	Acres Currently Landfilled (acres):		
County:	Weld	Average Depth (feet):		
State:	CO	Waste-in-Place (tons):	7,036,984	
Year Open:	1988	1998 Waste-in-Place (tons):	7,036,984	
Year Closed:				
B. LANDFILL GAS COLLECTION				
Estimated Methane Generation (mmscf/d):		2.22		
LFG Collection System Status:		Operational		
Current LFG Collected (mmscf/d):				
Collection and Treatment System Required Under NSPS/EG:		No		
C. LANDFILL GAS UTILIZATION				
Current Utilization:				
Utilization System Status:	Planned			
Utilization System Type:	Unknown			
Utilization System Start Year:	1998			
Electric Utility Provider(s):				
Natural Gas Provider(s):				
Energy Purchaser(s):	TBD			
Capacity:	Electricity Generation Project (MW)	OR	Direct Use Project (mmBtu/hr)	
Estimated Potential Capacity:	7		69	
Current Capacity:				
Planned Capacity:				
Utilities in County: Frederick Municipal Light System; Highline Electric Assn; Morgan County Rural Elec Assn; Poudre				
D. ENVIRONMENTAL BENEFITS OF UTILIZATION				
	<i>Potential</i>		<i>Current</i>	
Methane Reduction (tons/yr):	12,823		0	
CO2 Equivalent of CH4 Reduction (tons/yr):	269,281		0	
Emissions Avoided by Fossil Fuel Displacement:	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	CO2 (tons/yr)	SO2 (tons/yr)	CO2 (tons/yr)	SO2 (tons/yr)
Coal:	54,460	344	38,614	351
Fuel Oil:	44,698	288	31,693	185
Natural Gas:	30,056	0	21,311	0
E. CONTACT INFORMATION				
Landfill Owner			Landfill Operator	
Contact Name:	Rick Hoffman	Rick Hoffman		
Mailing Address:	P.O. Box 320	P.O. Box 320		
Phone Number:	(303) 673-9431	(303) 673-9431		
Fax Number:				

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Fort Collins-Loveland LF		Landfill Category: Candidate	
A. GENERAL LANDFILL INFORMATION			
Landfill Owner:	Larimer County	Annual Acceptance Rate (tons):	375,446
Landfill Owner Type:		Year Annual Acceptance Rate Reported:	
Alternative Landfill Name:		Design Capacity (tons):	
City:	Fort Collins	Acres Currently Landfilled (acres):	
County:	Larimer	Average Depth (feet):	
State:	CO	Waste-in-Place (tons):	12,558,321
Year Open:	1963	1998 Waste-in-Place (tons):	12,558,321
Year Closed:	1999		
B. LANDFILL GAS COLLECTION			
Estimated Methane Generation (mmscf/d):		3.17	
LFG Collection System Status:		N.A.	
Current LFG Collected (mmscf/d):			
Collection and Treatment System Required Under NSPS/EG:		No	
C. LANDFILL GAS UTILIZATION			
Current Utilization:			
Utilization System Status:	Unknown		
Utilization System Type:	Unknown		
Utilization System Start Year:			
Electric Utility Provider(s):			
Natural Gas Provider(s):			
Energy Purchaser(s):			
Capacity:	Electricity Generation Project (MW)	OR	Direct Use Project (mmBtu/hr)
Estimated Potential Capacity:	10		99
Current Capacity:			
Planned Capacity:			
Utilities in County:	City of Fort Collins, Light & Power; Estes Park Light & Power Dept; Loveland Light & Power; Moun		
D. ENVIRONMENTAL BENEFITS OF UTILIZATION			
	<i>Potential</i>		<i>Current</i>
Methane Reduction (tons/yr):	18,335		0
CO2 Equivalent of CH4 Reduction (tons/yr):	385,031		0
Emissions Avoided by Fossil Fuel Displacement:	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>
	CO2 (tons/yr)	SO2 (tons/yr)	CO2 (tons/yr) SO2 (tons/yr)
Coal:	78,138	494	55,213 502
Fuel Oil:	64,132	413	45,316 264
Natural Gas:	43,124	0	30,471 0
E. CONTACT INFORMATION			
Landfill Owner		Landfill Operator	
Contact Name:	Frank Lancaster	Frank Lancaster	
Mailing Address:	P.O. Box 1190 Natural Resources Department	P.O. Box 1190 Natural Resources Department	
Phone Number:	(303) 498-5770	(303) 498-5770	
Fax Number:			

* *Italicized indicates values estimated by EPA.*

Orchard Mesa SWDS		Landfill Category: Candidate	
A. GENERAL LANDFILL INFORMATION			
Landfill Owner:	Mesa County	Annual Acceptance Rate (tons):	183,247
Landfill Owner Type:		Year Annual Acceptance Rate Reported:	
Alternative Landfill Name:	Mesa County LF	Design Capacity (tons):	
City:	Grand Junction	Acres Currently Landfilled (acres):	
County:	Mesa	Average Depth (feet):	
State:	CO	Waste-in-Place (tons):	8,688,255
Year Open:	1955	1998 Waste-in-Place (tons):	8,688,255
Year Closed:	2007		
B. LANDFILL GAS COLLECTION			
Estimated Methane Generation (mmscf/d):	1.97		
LFG Collection System Status:	N.A.		
Current LFG Collected (mmscf/d):			
Collection and Treatment System Required Under NSPS/EG:	No		
C. LANDFILL GAS UTILIZATION			
Current Utilization:			
Utilization System Status:	Unknown		
Utilization System Type:	Unknown		
Utilization System Start Year:			
Electric Utility Provider(s):			
Natural Gas Provider(s):			
Energy Purchaser(s):			
Capacity:	Electricity Generation Project (MW)	OR	Direct Use Project (mmBtu/hr)
Estimated Potential Capacity:	6		62
Current Capacity:			
Planned Capacity:			
Utilities in County:	Grand Valley Rrl Pwr Line Inc; Public Service Co of Colorado; San Miguel Power Assn Inc; Western		
D. ENVIRONMENTAL BENEFITS OF UTILIZATION			
	<i>Potential</i>		<i>Current</i>
Methane Reduction (tons/yr):	11,380		0
CO2 Equivalent of CH4 Reduction (tons/yr):	238,988		0
Emissions Avoided by Fossil Fuel Displacement:	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>
	CO2 (tons/yr)	SO2 (tons/yr)	CO2 (tons/yr) SO2 (tons/yr)
Coal:	48,935	309	34,271 312
Fuel Oil:	40,164	259	28,128 164
Natural Gas:	27,007	0	18,914 0
E. CONTACT INFORMATION			
Landfill Owner		Landfill Operator	
Contact Name:	Bob Edminston	Kurt Stovall	
Mailing Address:	Waste Management Division Box 20000	8480 Tower Road	
Phone Number:	(303) 244-1777	(303) 371-5115	
Fax Number:			

Southside Solid Waste Disposal Site			Landfill Category: Shutdown	
A. GENERAL LANDFILL INFORMATION				
Landfill Owner:	Zupan Enterprises	Annual Acceptance Rate (tons):	166,936	
Landfill Owner Type:		Year Annual Acceptance Rate Reported:		
Alternative Landfill Name:		Design Capacity (tons):		
City:	Pueblo	Acres Currently Landfilled (acres):	114	
County:	Pueblo	Average Depth (feet):		
State:	CO	Waste-in-Place (tons):	5,163,653	
Year Open:	1968	1998 Waste-in-Place (tons):	5,163,653	
Year Closed:				
B. LANDFILL GAS COLLECTION				
Estimated Methane Generation (mmscf/d):	1.74			
LFG Collection System Status:	Operational			
Current LFG Collected (mmscf/d):	1.5			
Collection and Treatment System Required Under NSPS/EG:	No			
C. LANDFILL GAS UTILIZATION				
Current Utilization:				
Utilization System Status:	Shutdown			
Utilization System Type:	Direct Gas			
Utilization System Start Year:	1992			
Electric Utility Provider(s):				
Natural Gas Provider(s):				
Energy Purchaser(s):				
Capacity:	Electricity Generation Project (MW)	OR	Direct Use Project (mmBtu/hr)	
Estimated Potential Capacity:	5		54	
Current Capacity:				
Planned Capacity:			31	
Utilities in County:	Mountain View Elec Assn Inc; Public Service Co of Colorado; San Isabel Electric Assn Inc; Southeas			
D. ENVIRONMENTAL BENEFITS OF UTILIZATION				
	<i>Potential</i>		<i>Current</i>	
Methane Reduction (tons/yr):	10,053		5,782	
CO2 Equivalent of CH4 Reduction (tons/yr):	211,105		121,414	
Emissions Avoided by Fossil Fuel Displacement:	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	CO2 (tons/yr)	SO2 (tons/yr)	CO2 (tons/yr)	SO2 (tons/yr)
Coal:	42,621	269	30,272	275
Fuel Oil:	34,981	225	24,846	145
Natural Gas:	23,522	0	16,707	0
E. CONTACT INFORMATION				
Landfill Owner			Landfill Operator	
Contact Name:	Mike Zupan	Mike Zupan		
Mailing Address:	Highway 78 West Box 3446	Highway 78 West Box 3446		
Phone Number:	(719) 564-3672	(719) 564-3672		
Fax Number:				

* *Italicized indicates values estimated by EPA.*

WMI/Colorado Springs SWDS			Landfill Category: Candidate	
A. GENERAL LANDFILL INFORMATION				
Landfill Owner:	Waste Management, Inc.	Annual Acceptance Rate (tons):	622,167	
Landfill Owner Type:		Year Annual Acceptance Rate Reported:		
Alternative Landfill Name:		Design Capacity (tons):		
City:	Colorado Springs	Acres Currently Landfilled (acres):		
County:	El Paso	Average Depth (feet):		
State:	CO	Waste-in-Place (tons):	15,562,598	
Year Open:	1968	1998 Waste-in-Place (tons):	15,562,598	
Year Closed:	2002			
B. LANDFILL GAS COLLECTION				
Estimated Methane Generation (mmscf/d):	4.40			
LFG Collection System Status:	N.A.			
Current LFG Collected (mmscf/d):				
Collection and Treatment System Required Under NSPS/EG:	No			
C. LANDFILL GAS UTILIZATION				
Current Utilization:				
Utilization System Status:	Unknown			
Utilization System Type:	Unknown			
Utilization System Start Year:				
Electric Utility Provider(s):				
Natural Gas Provider(s):				
Energy Purchaser(s):				
Capacity:	Electricity Generation Project (MW)	OR	Direct Use Project (mmBtu/hr)	
Estimated Potential Capacity:	14		138	
Current Capacity:				
Planned Capacity:				
Utilities in County:	Colorado Springs Utilities; Fountain Electric Dept; Intermountain Rural Elec Assn; Mountain View E			
D. ENVIRONMENTAL BENEFITS OF UTILIZATION				
	<i>Potential</i>		<i>Current</i>	
Methane Reduction (tons/yr):	25,431		0	
CO2 Equivalent of CH4 Reduction (tons/yr):	534,041		0	
Emissions Avoided by Fossil Fuel Displacement:	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>
Coal:	108,131	684	76,580	697
Fuel Oil:	88,749	571	62,854	366
Natural Gas:	59,676	0	42,264	0
E. CONTACT INFORMATION				
	Landfill Owner		Landfill Operator	
Contact Name:	Russ Van Derkooy		Charles Bayley	
Mailing Address:	13320 East Highway 94		P.O. Box 460397	
Phone Number:	(719) 683-2600		(303) 373-0155	
Fax Number:				

* *Italicized indicates values estimated by EPA.*